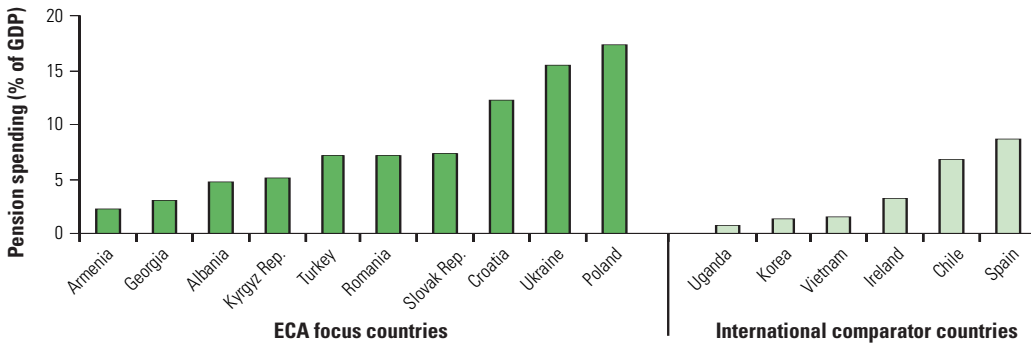


Pensions

Anita Schwarz
with contributions from Ufuk Guven

Public pension systems represent a large share of public spending throughout the Europe and Central Asia (ECA) region. As noted in chapter 2, relative to international comparator countries the levels of pension spending are significantly higher in ECA (figure 7.1). Much of the explanation for the difference lies in demographics and historical evolution—countries with older populations tend to spend more. However, within the ECA region some countries with younger populations, such as Turkey, spend more than some countries with much older populations, such as Armenia and Georgia, suggesting that pension policy also plays a role in determining the level of pension spending. ECA countries tend to have more costly systems with more generous benefits than non-ECA high-growth comparators. Given the finding in chapter 3 that high levels of public transfers are associated with lower economic growth, ECA countries need to look at their competitors in the world economy and decide whether the policies they are following will allow them to achieve the levels of long-run growth they desire for their populations.

FIGURE 7.1

Pension Spending in ECA and Comparator Countries, 2004 or Latest Available Year

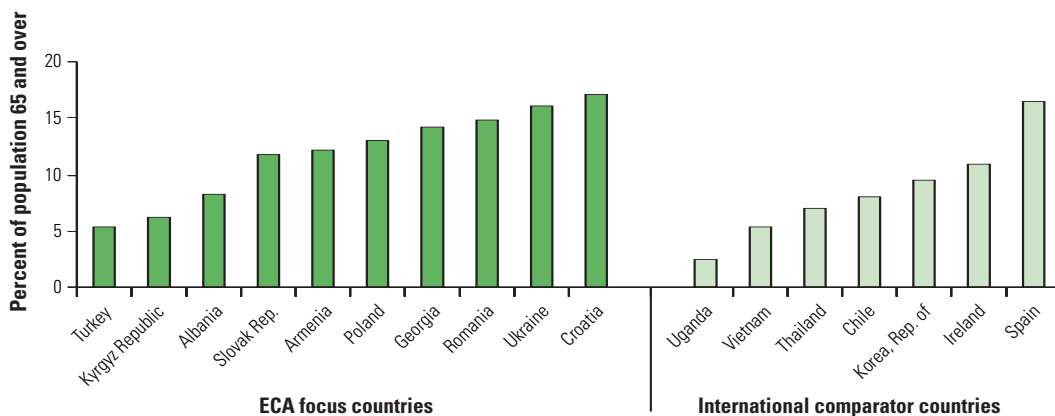
Source: World Bank Social Protection database.

Characteristics of ECA's Pension Systems

The ECA region is old relative to the international comparators (figure 7.2). More than 10 percent of the population in two-thirds of the ECA focus countries is over age 65. By contrast, only two of the seven non-ECA comparators have populations with 10 percent or more of the people over age 65.

Furthermore, pension systems in ECA are longstanding and therefore “mature.” When a pension system financed on a pay-as-you-go basis first begins, it only collects revenue. Individuals make contributions, but almost no one has enough contributions in the first years to receive a pension. A few contributors may suffer disability soon after the pension system starts, but this tends to have a small effect. Thus, “immature” systems have few expenditures and generally run surpluses. As the systems mature, contributors begin to reach retirement age, increasing expenditures of the pension system. Finally, when all old-age retirees have spent their entire working lives as contributing members of the pension system—a process that may take 50 to 60 years—the system is judged to be mature. Expenditures are much higher in mature systems, and whether these systems remain in financial balance or run deficits depends on the relative generosity of the benefit parameters relative to the contribution parameters. Most ECA countries have fully mature pension systems that have been in existence for at least 50 years (figure 7.3). In the comparator coun-

FIGURE 7.2

Old-Age Populations in ECA and Comparator Countries, 2004 or Latest Available Year

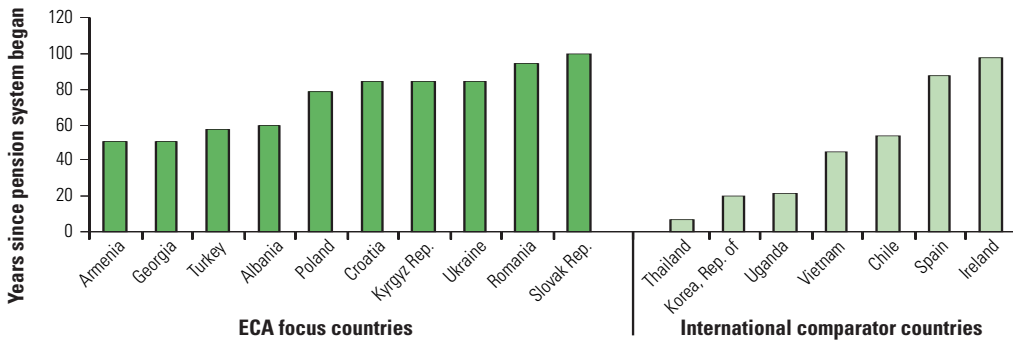
Source: UN Population Statistics.

tries, by contrast, pension systems are often much younger, with the exception of Chile, Ireland, and Spain. In the youngest of these systems, Thailand, the pension system has been functioning only since 1999. A few disabled and survivors are currently collecting pensions, but no contributors have paid into the system long enough to collect an old-age pension.

Based on age and system maturity, pension systems in Spain and Ireland are reasonably comparable to those in many ECA countries. However, a third feature of ECA countries makes them different from even these older countries with well-established pension systems, and that is the mismatch between pension coverage and contributor coverage. Countries around the world have different coverage rates in their pension systems, whether old-age coverage (the percentage of the elderly population receiving pensions) or contributor coverage (the percentage of the working-age population or labor force contributing to the pension system). Countries usually have either low coverage for both contributors and pensioners or high coverage for both, although there are a few exceptions. Most of the Organisation for Economic Co-operation and Development (OECD) countries have high coverage for both, while middle-income countries tend to have moderate coverage, and low-income countries low coverage. ECA countries are unique in that labor force participation and contributor coverage had historically been close to 100 percent for both men and

FIGURE 7.3

Maturity of Pension Systems

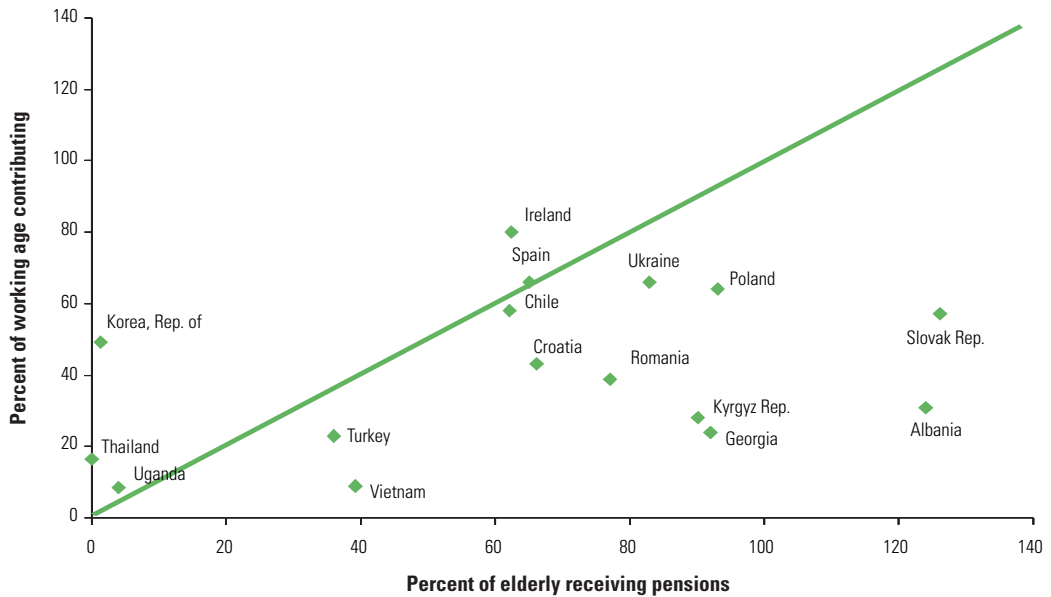


Source: Author's calculations.

women. As a result, most of the elderly are eligible for pensions and are receiving them. However, the situation is very different for today's workers. Labor force participation has dropped, particularly among women given the loss of state-provided childcare and other benefits, and unemployment rates are high. Even among those working, the informal sector attracts a substantial portion of the labor force, particularly in the lower-income countries. As a result, ECA countries are faced with unusually high pension expenditures arising from the high share of beneficiaries among the elderly, but such spending is not supported by high contributions given the declining revenue base.

Figure 7.4 shows the percentage of elderly receiving pensions compared with the percentage of working-age population making contributions in ECA and comparator countries. The elderly are defined as those 65 and older, while the working-age population is defined as those between the ages of 15 and 64, inclusive.¹ If countries from around the world were presented in this figure, most would lie relatively close to the 45-degree line, whether high-income countries with high coverage for both elderly and working age or low-income countries with low coverage for both elderly and working age. Where the pension system is immature or where coverage is growing, which is the case in many emerging market economies, such as the Republic of Korea and Thailand, the countries lie above the 45-degree line. ECA countries all lie below the 45-degree line and many substantially below, suggesting that pension expenditures in these countries are higher than pension revenues, even more so than suggested by pure demographics. Among the international comparators, only Vietnam,

FIGURE 7.4
Coverage Rates for Elderly and Working-Age Populations



Source: World Bank Social Protection database.

which shares some of the transition history of the ECA countries, lies significantly below the 45-degree line. Chile also lies below, but not significantly so. Turkey, which does not share the transition history of the other ECA countries, also lies below the 45-degree line, largely because of its abnormally low retirement age, which currently stands at 45 for women and 47 for men. The low retirement age reduces the number of working-age individuals who are active contributors to the pension system.

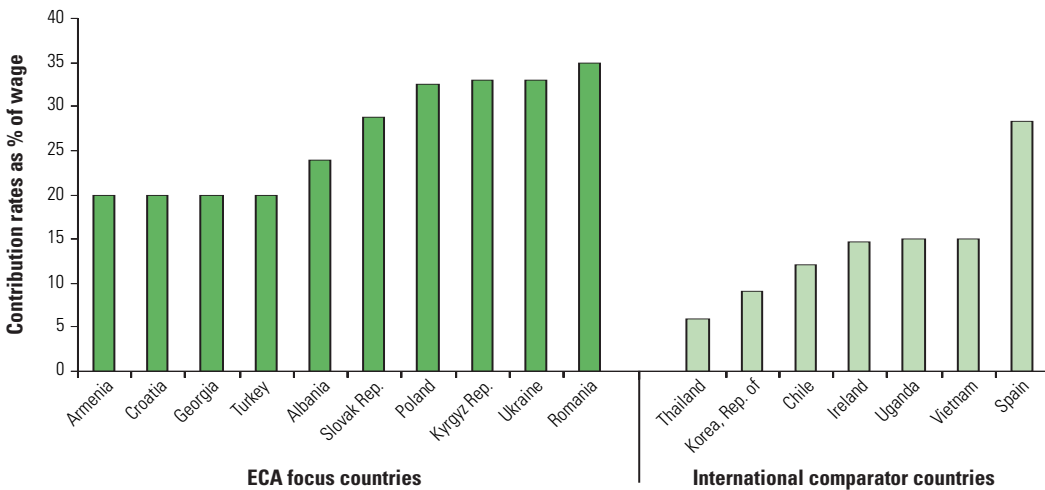
Fiscal Implications

The immediate implications of this imbalance between contributors and pensioners in ECA are fiscal, with high levels of expenditures in the pension system but moderately low revenues to finance such expenditures. The initial reaction of many ECA countries to this fiscal imbalance has been to raise contribution rates even further to counteract the declining revenue. However, the original contribution rates

were already high, having been set at a time when employers were not subject to market constraints and contributed whatever the state required. As discussed in chapter 9, these high payroll tax rates have been one among several factors encouraging the rapid growth of informal labor markets, further decreasing revenues to the pension system. Several countries have reduced payroll taxes recently in an effort to stem the growth of the informal sector and potentially raise revenues. Nevertheless, contribution rates are still high relative to the comparator countries, as shown in figure 7.5. Among the comparators, only Spain has contribution rates of similar magnitude to the ECA region, and half the ECA sample has rates above Spain's. Furthermore, lowering payroll tax rates is not necessarily the answer to the fiscal problem, at least in the short run. Experience to date in ECA and elsewhere suggests that formal sector employment may increase somewhat from lowering payroll taxes, but the increased employment is insufficient to actually raise revenues, resulting in an even larger shortfall between expenditures and revenues.

In the longer term, the fiscal issue could disappear if it were caused solely by an imbalance in coverage. As pensioners whose rights are based on the old system and their complete work histories leave the system and are replaced by today's workers with their incomplete

FIGURE 7.5
Pension System Contribution Rates in ECA and Comparator Countries



Source: Social security programs from throughout the world.

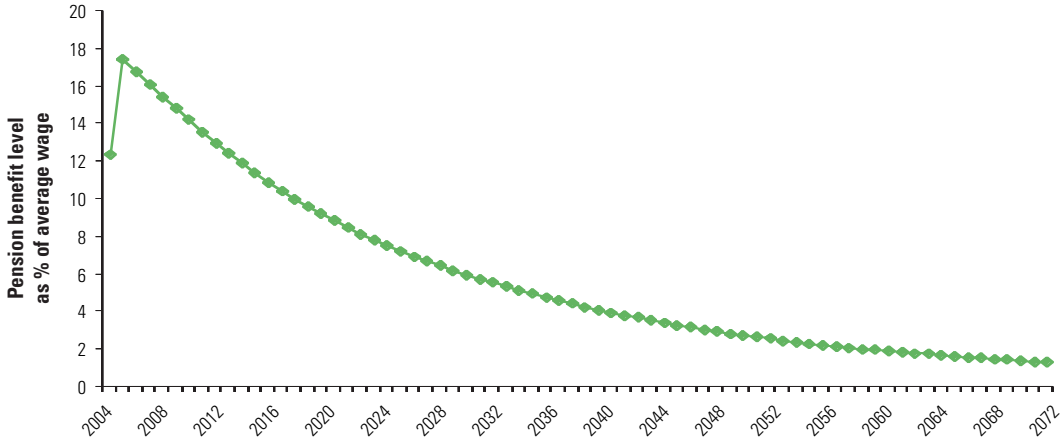
work histories, the number of pensioners will generally fall. The expenditures needed to support this fewer number of pensioners will thus be more consistent with the revenue being generated from workers. However, this adjustment will take place in the context of an aging population, which naturally tends to increase the number of pensioners relative to the number of contributors. Furthermore, the pension parameters themselves are still generous in these countries, suggesting that there might not be fiscal balance even if the countries were in a demographic steady state.

The long-term projections that are now available do not lead to the conclusion that the problem is only short term and will disappear as smaller numbers of today's contributors begin to retire. Detailed long-term projections of the pension system are available for half of the ECA focus countries: Albania, Georgia, Romania, the Slovak Republic, and Turkey. Some of these countries have put in place policy parameters that constrain the future growth of pension levels so that financial shortfalls are closed. However, social problems may well arise as a result. First, if individuals see extremely low rates of return from their pension contributions, they will have even less incentive to contribute, potentially increasing the rate of informalization. Second, at some point pensions may no longer fulfill their initial objective of providing poverty relief for the elderly, and political pressure to provide better pensions may force increases in pension levels beyond what is envisaged in today's legislation. If pension levels were to rise substantially, the pension systems would begin to face the same fiscal pressures as the countries that have not constrained their systems.

Georgia, for example, is one of the countries that has restricted pension levels. The pension benefit is virtually flat for most pensioners, aside from a few special categories. The benefit level is also extremely low, having been raised to 17.5 percent of the average wage in 2005 from an even lower level and having remained fixed since then in nominal terms. Even if the pension is indexed to inflation, benefits will fall and the pension system will run surpluses in future years (figure 7.6 and 7.7). The International Labour Organization (ILO) standard is that pension systems pay benefits equivalent to 40 percent of wages after 30 years of service. Already, the 17.5 percent being paid is well below that standard and is expected to fall further given current parameters in the pension system. Should the government attempt to raise the pension level to ILO standards, expenditures would balloon, putting the pension system into significant deficit.

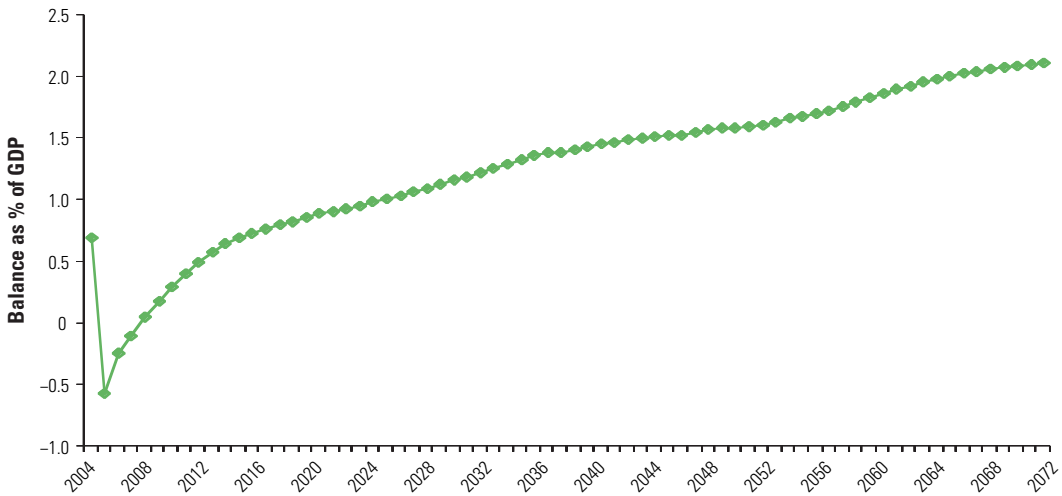
Albania is similar in many ways to Georgia. Pension benefits are not as low as in Georgia and there continues to be some differentia-

FIGURE 7.6
Georgia: Future Pension Benefit Levels



Source: Author's calculations derived from the World Bank's pension reform option simulation toolkit PROST model.

FIGURE 7.7
Future Financial Balance in Georgia's Pension System



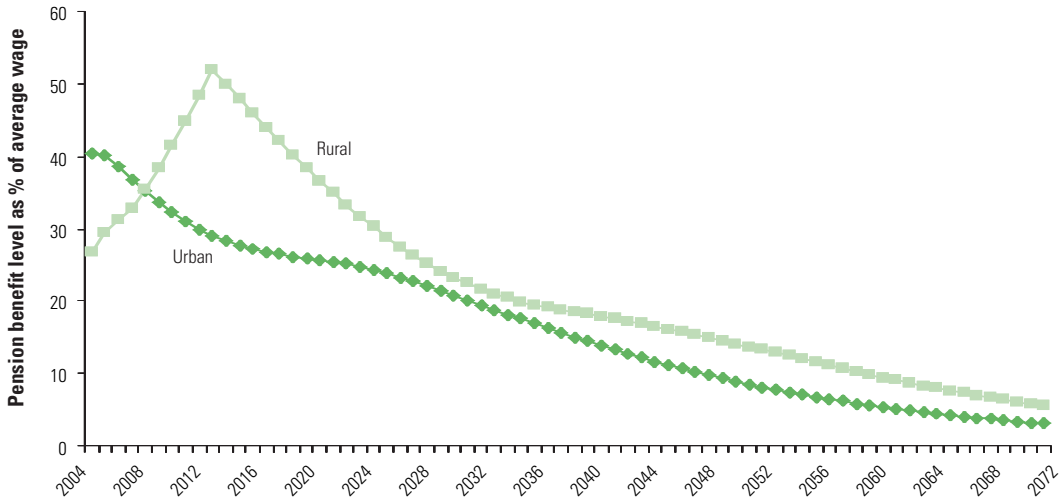
Source: Author's calculations derived from the World Bank's PROST model.

tion in pension levels, although 57 percent and 70 percent of male and female urban pensioners, respectively, and 100 percent of rural pensioners are receiving the minimum pension. However, as in Georgia, current parameters in the pension system result in a surplus in the long run and a considerable reduction in benefits. The Albanian system is driven by a maximum pension that is implicitly indexed only to inflation. As real wages grow, pension benefits will become increasingly constrained by the maximum pension that remains constant in real terms, resulting in declining pension levels relative to wages. Benefit levels are shown separately in figure 7.8 for urban and rural pensioners relative to their respective wages. The sharp initial upturn in rural pensions arises from a policy decision to equalize the urban and rural minimum pensions by 2012. Subsequently, both pension levels decline. Contributions are collected on current wages, and as benefits remain fixed in real terms while wages grow, the system will begin to run a surplus (figure 7.9). The surplus will be larger than in Georgia because the contribution rate is higher and Albania's younger population results in labor force growth throughout the period, in contrast to Georgia's declining labor force. In Albania, as in Georgia, the issue is whether these extremely low future pension levels will be socially sustainable.

Turkey is more typical than Georgia or Albania, in that it is expected to continue to run a deficit in the long run. However, it is clearly atypical for the ECA region, in that large numbers of elderly in Turkey are currently not eligible to receive pensions because they did not contribute to the system. The main problem in Turkey stems from the removal of a minimum retirement age in 1991, which left a 15-year contributory period as the primary eligibility condition, enabling people as young as 35 to retire. A 1999 law tried to fix the problem, but the government was unwilling to impose a higher retirement age immediately for those close to retirement. It chose instead to apply an extremely slow phasing in of normal minimum retirement ages, starting at 38 for women and 43 for men for the first cohorts to retire after the 1999 law. Eventually the ages were to be raised to 58 and 60, but these ages only apply to new entrants after 1999. Under the parameters in the 1999 law, the pension fund balance in Turkey would remain in deficit for the foreseeable future (figure 7.10). Deficits would stop growing in the medium term as the increasing retirement age counteracts the impact of an aging population. However, once the final retirement age has been reached, the deficits would quickly accelerate and continue to worsen throughout the period. Average pension benefit levels would remain fairly constant throughout the period and therefore are not shown separately. Legislation adopted by

FIGURE 7.8

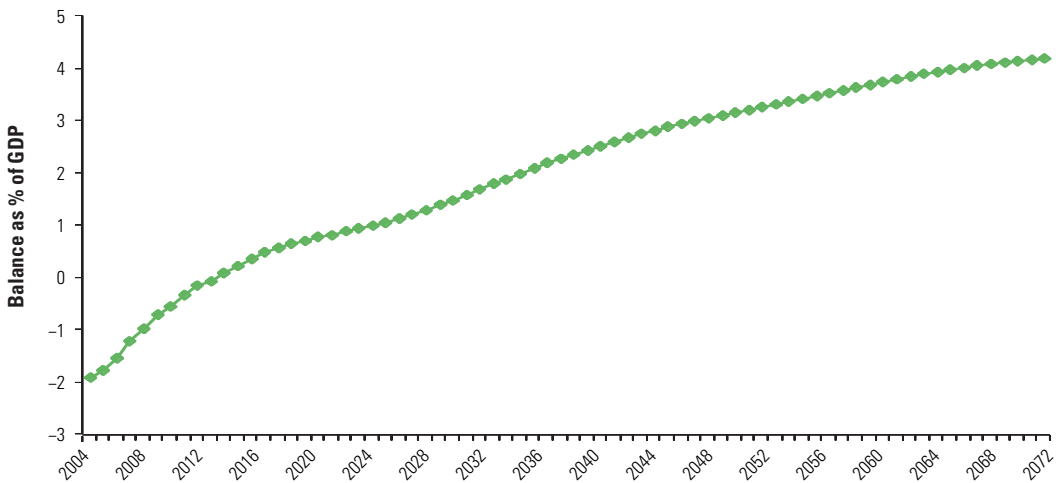
Albania: Future Pension Benefit Levels in the Urban and Rural Sectors



Source: Author's calculations derived from the World Bank's PROST model.

FIGURE 7.9

Future Financial Balance in Albania's Pension System



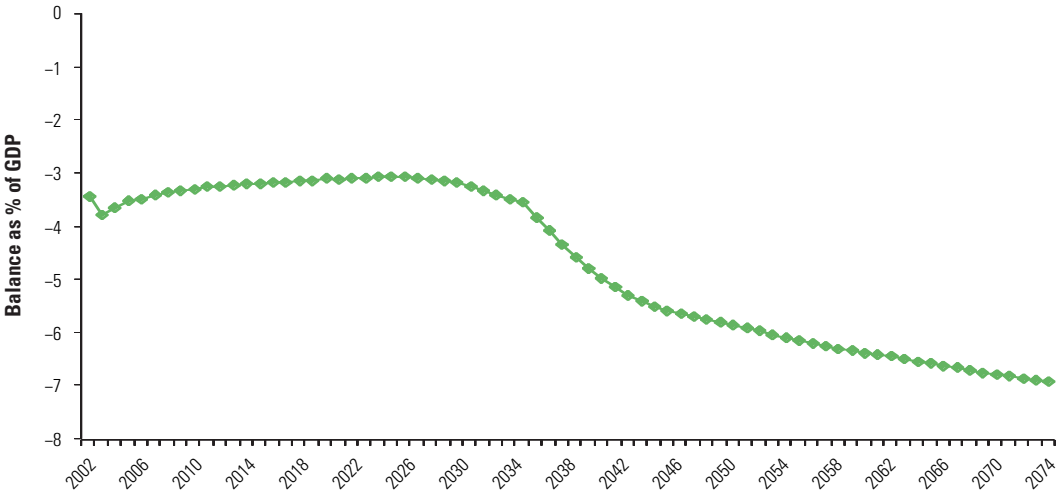
Source: Author's calculations derived from the World Bank's PROST model.

the Turkish Parliament in 2006 raised the retirement age still further to 65, but the law was declared unconstitutional in December 2006. Because it is unclear how the situation will be resolved, the simulations shown in figure 7.10 do not incorporate the new parameters.²

The Slovak Republic is also a more typical ECA country. It reformed its public pension system in 2004. Individuals receive points for each year of contribution, with the number of yearly points tied to the individual’s salary (as compared with the average wage). Upon retirement, these points are monetized and converted into a pension. In 2005, the government introduced a privately managed defined-contribution pillar. Current contributors were given an 18-month window to choose whether they wanted to split their contribution, with a portion going to the funded pillar and the remainder to the public system, or to remain with the public system alone. New entrants to the labor force were automatically enrolled in the mixed system beginning in 2005.

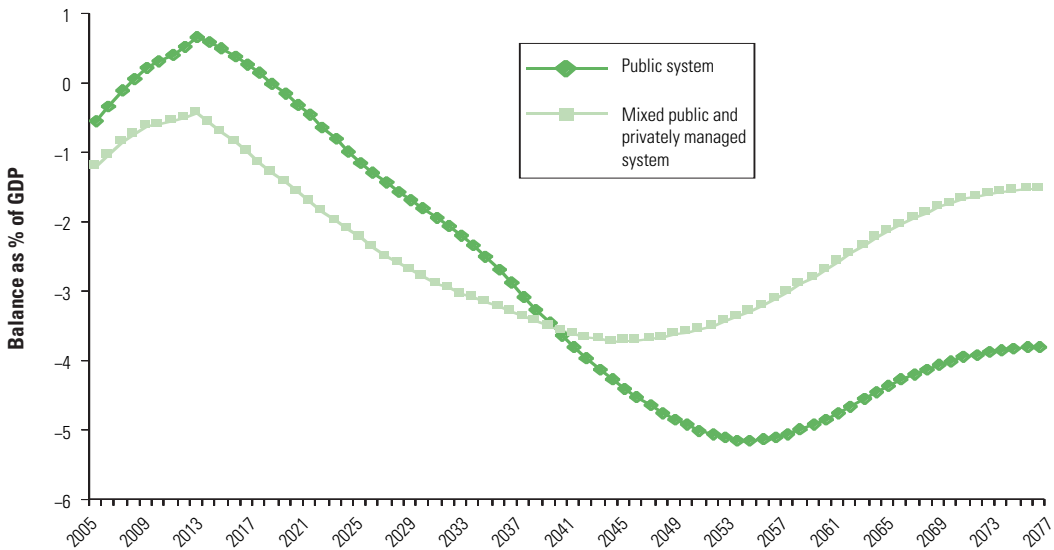
Figure 7.11 shows the financial balance of the Slovak public system alone and with the addition of the funded system. The introduction of the funded option worsens the financial condition of the public

FIGURE 7.10
Future Financial Balance in Turkey’s Pension System



Source: Author’s calculations derived from the World Bank’s PROST model.

FIGURE 7.11

Future Financial Balance in the Slovak Republic's Pension System

Source: Author's calculations derived from the World Bank's PROST model.

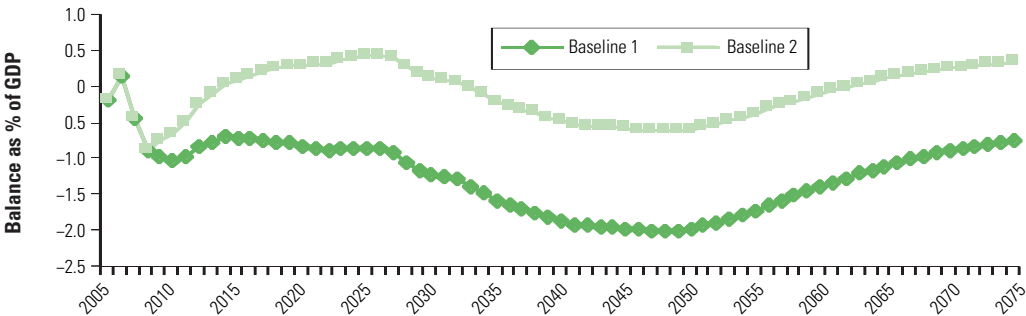
pension system in the short run, because contributors who choose to join the funded system contribute less revenue to the public system. Because the elderly had rights in the old system, the public system's expenditures do not change in the short and medium run but fall in the long run as these people leave the system altogether. Those who belong to the mixed system receive smaller public pensions in the longer run, lowering the expenditures of the public system and improving its balance. The initial improvement in the financial balance comes from parametric reforms of the public system introduced in 2004, including an increase in the retirement age.³ The improvement over time reflects a new equilibrium between contributors and beneficiaries coming both from increased demographic stability and increased balance between coverage of contributors and beneficiaries. Average pension levels are expected to remain fairly constant through the simulation period for the mixed system and thus are not shown separately.

The final country, Romania, represents a mixture of the Georgian and Albanian systems and that of the Slovak Republic. The Slovak system maintains deficits in perpetuity, but pension levels do not

decline over time. In Romania, the pension system approaches equilibrium but benefits do decline, although not as sharply as in Georgia or Albania (figures 7.12 and 7.13). The Romanians have also moved to a point system, but in their case the value of the point is left to the discretion of the policy maker. The average benefit given to a new retiree must lie between 30 and 50 percent of average wage after completion of the required length of service, which moves over time to 35 years for men and 30 years for women. The indexation of the pension postretirement is also discretionary, depending on the finances of the system. Baseline 2 shows the financial balance and the benefit ratios if the postretirement pension is indexed to inflation. Baseline 1, which shows a worse financial balance but higher benefit level, uses an indexation value some 50 percent higher than inflation, which has been typical of increases in recent years. In both cases, benefits fall below the ILO’s 40 percent standard and fiscal balances improve in the very long run, as demographics stabilize and the coverage rates among contributors and beneficiaries become aligned.

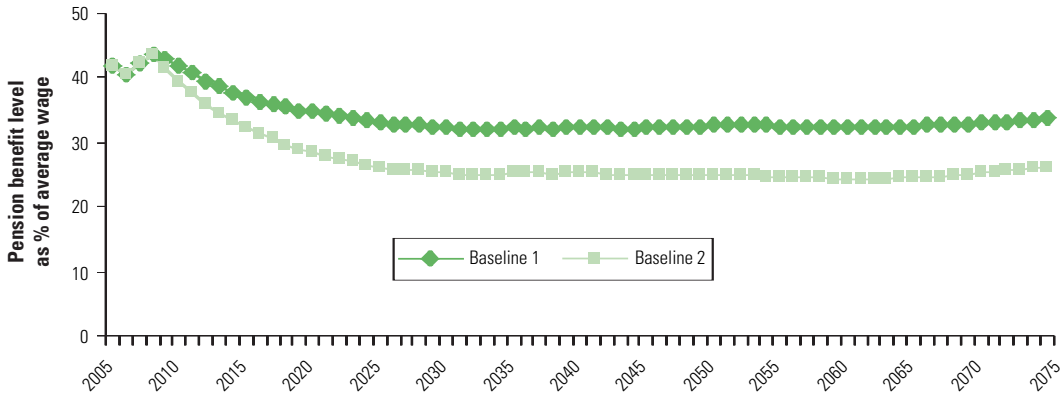
In sum, while the long-run rebalancing between contributors and beneficiaries is expected to improve the fiscal balances of pension systems in ECA, it will not be sufficient to eliminate deficits while maintaining reasonable benefit levels in the future. Those countries that eliminate deficits are likely to do so at the cost of very low pensions, while those that maintain benefits are likely to remain in deficit.

FIGURE 7.12
Future Financial Balance in Romania’s Pension System



Source: Author’s calculations derived from the World Bank’s PROST model.

FIGURE 7.13

Romania: Future Pension Benefit Levels

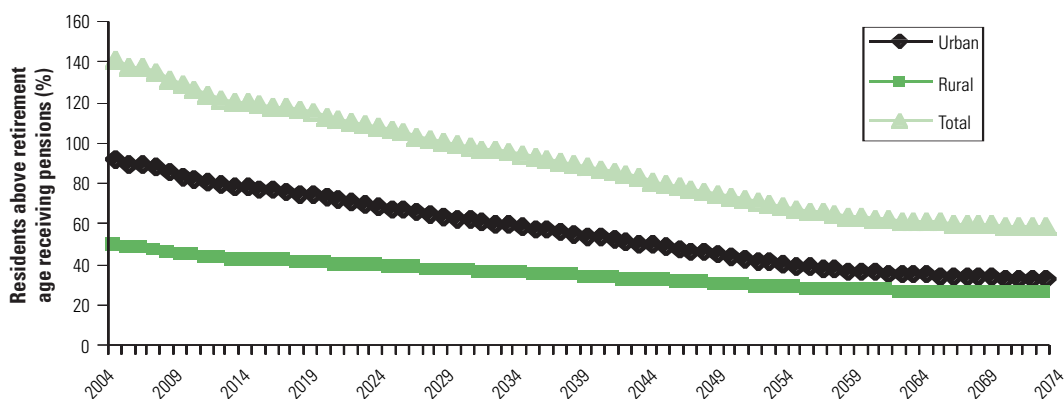
Source: Author's calculations derived from the World Bank's PROST model.

Social and Poverty Implications

While the fiscal problems associated with pension systems are very real, it is important to recognize that ECA's pension systems have had a positive impact on poverty reduction. Pensions are not necessarily well-targeted in the ECA region, but their coverage is widespread, and in some countries the benefit levels have been high enough to support multiple people on one benefit (World Bank 2005d). In other countries, however, the benefit is insufficient to keep most elderly households out of poverty. In Armenia, for example, the average pension is only 65 percent of the extreme poverty line. But even in Armenia, some 6–12 percent of the one-third of the population living in extended families where an elderly person would be poor without the pension, and an additional 5–14 percent of the population would be extremely poor without the pension (World Bank 2003a). Of eight countries reviewed for this study,⁴ the pension played a significant role in reducing poverty in all but Croatia.

The situation is quite different in most of the developing world, where the elderly are less often the poorest members of society (Kakwani and Subbarao 2005). There tend to be fewer elderly in developing countries, and the really poor often do not survive until old age.

FIGURE 7.14
Future Drop in Elderly Receiving Pensions in Albania



Source: Author's calculations derived from the World Bank's PROST model.

With much lower coverage, those who are covered by pensions tend to be the higher-income people within their cohort, often those with public sector or other formal sector employment. Furthermore, most developing countries have a high rate of cohabitation, with the elderly often residing in households with younger family members. Income sharing occurs in both directions, and there is little difference in poverty rates between the elderly and the younger generations. In contrast, in much of the developed world the elderly live as couples or alone (Whitehouse 2002). Without pensions, most of these elderly would be poor. Coverage is also relatively high despite lower women's labor force participation rates in some countries, because women often qualify for widow's pensions even when they have not been employed themselves.

ECA countries tend to fall in a middle ground. They have the high pension coverage of OECD countries, but cohabitation across generations is increasingly common as a means of income sharing. It is likely, however, that far fewer members of today's labor force in ECA will have pension rights when they retire. As a result, while the pension system reduces poverty today, it is less likely to play that role in the future. Figure 7.14 shows the potential future drop in elderly beneficiaries in Albania as a percentage of the elderly population. While the drop in Albania is particularly steep, all the ECA countries are likely

to experience a fairly substantial fall in the percentage of elderly eligible to collect pensions in the future.

This drop in coverage has two implications for the future. First, because today's contributors tend to have higher incomes than non-contributors, transfers to cover pension system deficits in the future are likely to become more and more regressive, as future expenditures are focused on those lucky enough to have maintained high-paying formal sector jobs while the revenues are drawn from a broader population. To avoid this regressivity, pension systems must become increasingly self-financing, supported primarily by revenues provided by contributors and their employers. Second, as the percentage of elderly receiving pension benefits falls, governments may need to provide additional social assistance to the uncovered elderly to make sure they do not fall significantly below the poverty line. Thus, projections of fiscal improvements in the pension system may be misleading, offset by additional social assistance expenditures needed to alleviate old-age poverty of the uncovered elderly.

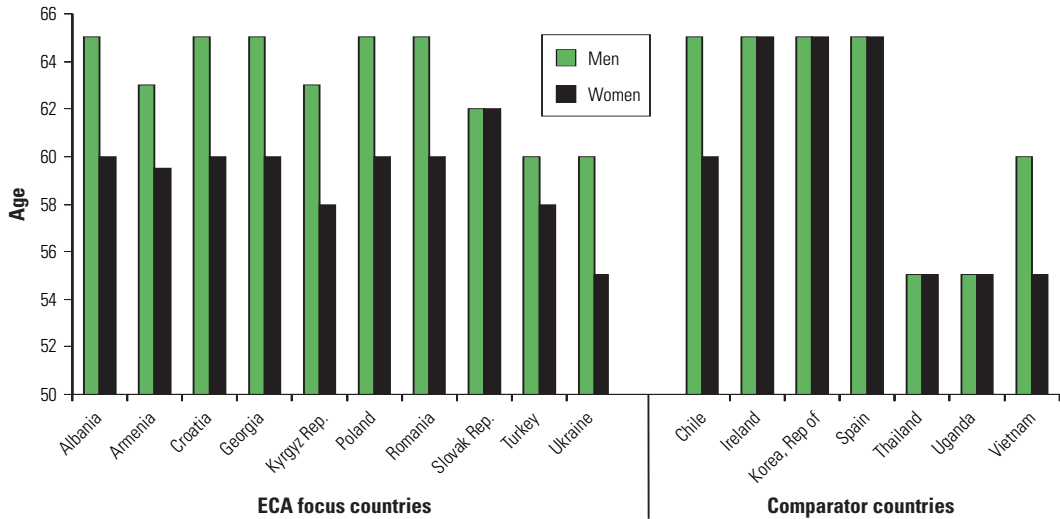
Options for Reform

What scope exists for further parametric reform in today's pension systems? Parameters in ECA focus countries and non-ECA high-growth comparators may look similar on average; thus it may not be readily apparent that ECA countries have scope for further reform. However, many of the comparator countries are on quite different points in the evolution of their pension systems. Young countries with rapidly expanding labor forces or with very new pension systems can afford to provide generous benefits because their pension expenditures are quite small. It is only when these countries face fiscal constraints that they must tighten their pension parameters.

Retirement Age

A critical parameter is the retirement age, which is still relatively low in ECA countries. Retirement ages already legislated for future retirees are shown in figure 7.15. However, it should be noted that the ages shown for the ECA countries are not the ages in force today. In all cases, the ages shown are the eventual retirement ages when all current laws become fully effective. Current retirement ages are considerably lower. Furthermore, countries often allow early retirement to certain older workers, and most ECA countries make generous use of such provisions. So not only are legal retirement ages, which are

FIGURE 7.15
Retirement Ages in ECA and Comparator Countries



Source: World Bank Social Protection database.

lower in ECA countries than in comparator countries with older populations, lower than what is shown, but effective retirement ages are also often substantially lower than the legal retirement age.

Two trends stand out in figure 7.15. First, with the exception of the Slovak Republic, none of the ECA sample countries have equalized retirement ages for men and women. By contrast, five of the seven international comparators apply the same ages for men and women. There is little justification for maintaining an age differential between men and women. Women live longer than men—much longer in ECA,⁵ and maintaining a lower retirement age for women results in an almost doubling of the period during which benefits are received for women relative to men. Second, while the younger comparator countries tend to have lower retirement ages, the older comparator countries have moved the retirement age to 65 for both men and women. Among ECA countries, the retirement age is only slowly moving to 65 for men, and no country among the sample has yet adopted 65 as the retirement age for women. Retirement age is a powerful parameter within the pension system, and this analysis suggests that there is still room for a further tightening of the official retirement age and for reducing the practice of freely allowing early retirement.

Indexation

Indexation is another parameter that can help to reduce pension costs. However, the issue is highly politicized given wage trends during transition. Before 1991, pensions were provided in a non-market-constrained economy and were generally relatively high. Since then most countries faced with high pension spending have undertaken reforms to reduce pension levels. At the same time wages tended to fall during the transition recessions in the 1990s, and pensions based on the new wage levels were lower than they had been previously. Now, as economies recover and wages rise, there are political pressures to raise pensions together with wages. Given the number of pensioners and their political power, governments are likely to agree. As a result many ECA countries routinely increase pensions by more than inflation.

Table 7.1 shows the indexation schemes in the ECA focus countries and the comparator countries. Of the 10 ECA countries, just three have legislation that links pension increases to inflation only, and only Poland actually follows price indexation (and has done so just since 2005). The majority of the rest have routinely awarded higher increases than inflation would justify, some by law and some on an ad hoc basis. Indexation in Armenia and Georgia is ad hoc and is routinely below the inflation rate, which explains their low levels of pension expenditures. Ukraine had legislated indexation to consist of 20 percent of wage growth and 80 percent inflation unless the inflation rate is higher than wage growth (in which case it became 100 percent inflation). However, before the last election, the previous government dramatically increased the level of the minimum pension, raising expenditures almost 50 percent. The government was subsequently forced to underindex pensions to reduce costs. Among the international comparators, three countries index to inflation and a fourth increases pensions on an ad hoc basis meant to be in line with inflation. Only Ireland raises pensions along with average wages. Vietnam indexes pensions to growth in the minimum wage, which may or may not be linked to economywide average wage growth.

Benefits

Comparisons of benefit levels are difficult because of the different ways of computing benefits, but table 7.2 tries to provide some cross-country comparison. The accrual rate, which is the benefit paid per year of service (if applicable), covers a wide spectrum in both the ECA focus countries and the comparator countries. The situation is further

TABLE 7.1
Pension Indexation Post-Retirement in ECA Sample and International Comparator Countries

Country	Inflation (%)	Wage (%)	Other
Albania	100	n.a.	Set to inflation by law, but in practice always higher
Armenia	n.a.	n.a.	Ad hoc basis
Croatia	50	50	
Georgia	n.a.	n.a.	Ad hoc basis
Kyrgyz Republic	n.a.	n.a.	Ad hoc basis
Poland	100	n.a.	
Romania	n.a.	n.a.	Ad hoc, but usually higher than inflation
Slovak Republic	50	50	
Turkey	100	n.a.	Set to inflation by law for main schemes, but in practice always higher
Ukraine	80	20	Slightly below inflation following the 2005 minimum pension increase
International Comparators			
Chile	100	n.a.	
Ireland	n.a.	100	
Korea, Republic of	100	n.a.	
Spain	100	n.a.	
Thailand	n.a.	n.a.	Ad hoc, but meant to accommodate inflation
Uganda	n.a.	n.a.	Paid as lump sum
Vietnam	n.a.	100	Grows with minimum wage

Source: World Bank Social Protection Database.

Note: n.a. = Not applicable.

complicated by the wide variety in benefit calculation schemes. In the traditional defined-benefit scheme, the accrual rate is the central feature. Individuals receive, for example, 2 percent of their average pensionable wage for every year they have contributed, subject to some minimum and maximum. There are still complications because different countries use different averaging periods—such as lifetime, three years, five years, or best three out of last ten—to calculate the pensionable wage. Furthermore, wages are rarely averaged at their nominal values to calculate the pensionable wage; they are typically revalued in line with inflation or average earnings growth to create a reasonable pensionable wage for the retiree.

At least four other types of benefit determination exist in this group of countries. Some countries—Armenia, Georgia, and Albania—make a flat payment irrespective of an individual's earnings, and in some cases irrespective of the years of contribution. This can be in lieu of or in addition to a pension linked to earnings or years of contribution. Because these flat payments are typically indexed on an ad hoc basis, they are difficult to convert to a comparable accrual rate. Among the comparators, Ireland calculates the pension as a flat payment based on years of service, and Korea has a component that is flat.

TABLE 7.2

Benefits Provided in ECA Pension Schemes and in Comparator Schemes

Country	Accrual rate	Details of formula calculation
ECA sample countries		
Albania	2%	Albania provides a basic pension equal to the minimum pension of about 38 percent of average wage for 35 years of service plus 1 percent of lifetime average wage per year of service, but the benefit is highly constrained by limits on the maximum pension
Armenia	n.a.	Base pension of 3,000 drams plus 140 drams per year of contribution multiplied by a coefficient (roughly \$US 6 for the pension and 0.25 per year of contribution)
Croatia	0.825%	Covers only the public pension, which is calculated on a point system; there is a mandatory private part as well.
Georgia	n.a.	Flat rate of 28 lari per month (roughly \$15)
Kyrgyz Republic	n.a.	Basic flat rate of 222.6 soms, but not less than 12 percent of average wage after 25/20 (25 for men, 20 for women) years of service plus 1 percent for each year before 1998 and notional account thereafter; minimum pension is 100 percent of minimum wage (roughly \$5)
Poland	0.67% ^a	Notional account system, but with mandatory funded system
Romania	1.4% for men; 1.67% for women	Point system
Slovak Republic	1.19%	Point system but also has a mandatory funded pillar
Turkey	3.5% for first 10 years; 2% for next 15 years; 1.5% thereafter	n.a.
Ukraine	1%	n.a.
International comparator countries		
Chile	n.a.	Privately managed funded system
Ireland	n.a.	Flat benefit designed to be approximately 34 percent of average wage after 35 years of contributions
Korea, Republic of	1.5%	Pensionable base is average of own lifetime earnings and average earnings of all insured for past three years
Spain	3%	n.a.
Thailand	1%	n.a.
Uganda	n.a.	Provident fund paying lump sum
Vietnam	3% for first 15 years; 2% for men and 3% for women for each additional year	n.a.

Source: World Bank Social Protection Database.

Note: n.a. = Not applicable. Accrual rate is the benefit earned per year of contribution as a percentage of previous wages.

a. Estimated by Whitehouse (2006).

A second type of benefit calculation uses the point system, where individuals get points for each year of contribution proportional to their contributory wage relative to average wage. These points are then converted to pensions at retirement. If the point value is indexed to average wage growth, as in the Slovak Republic, these systems are almost identical to the conventional defined-benefit system, with the value of the point as a percentage of average wage serving as an accrual rate. However, in other countries, such as Croatia, the value

of the point is indexed to a mix of inflation and wage growth, suggesting that the point as a percentage of average wages will generally decline over time. In such systems there is no unique accrual rate. In other point systems, as in Romania, the value of the point is determined on an ad hoc basis within certain bounds, again yielding no unique accrual rate.

The third type of pension calculation is the notional account calculation, as used in Poland and the Kyrgyz Republic. In this case, an individual's contributions accumulate in an account on which an interest rate is paid, the rate tied to some indicator in the economy such as wage growth. On retirement, the accumulated account balance is converted into an annuity taking into account life expectancy at the age of retirement. Because the variable to which the notional interest rate is tied varies and life expectancy is expected to grow over time, again the accrual rate will not be unique.

Finally, the last form of benefit calculation is to allow the contributions to accumulate in an investment account that pays interest according to the investments of the fund. Pensions are determined at retirement from the account balance and current life expectancy. Poland, Croatia, and the Slovak Republic incorporate this type of system within their overall pension structure, and Chile and Uganda rely on it completely. But again, accrual rates are difficult to determine because they depend on the underlying changes in interest rates and life expectancies.

Given these complexities, it is difficult to determine whether benefit levels are higher or lower in ECA countries than in comparator countries on the basis of table 7.2. Benefit rates above 1.5 percent per year are generally not financially sustainable in the long run, which suggests that benefits in Turkey are probably too high. Albania also looks suspect, although its stringent maximum limits have resulted in much lower pensions than would appear to be the case on the basis of the formula alone.

Funded Pillars

Several ECA countries have moved to reduce their public pension liabilities not by parametric adjustments alone, but by also moving to privately managed defined-contribution systems. Croatia, Poland, and the Slovak Republic are among the countries that have introduced such funded pillars. In each of these cases, a portion of the total contribution is diverted to the privately managed funded accounts in return for a reduction in the public pension that individuals will receive upon retirement. Introducing such a system involves giving

up current contribution revenue, resulting in a higher deficit in the short run, but it results in reduced public liabilities in the future.

Is this a strategy the rest of the ECA region should follow? For this strategy to work, individuals need to feel that their savings are safe, which requires that governments provide significant regulation and supervision of private pension funds. Investment strategies generally need to allow for foreign investment of some of the money. And the transition from one pension system to another must be fiscally affordable. Many of the early transformers have used privatization revenues to help offset the costs of the transition. Unless these preconditions exist in the remaining ECA countries, the policy is unlikely to provide adequate returns and may result in demands for further government intervention.

Contribution Rates and Coverage

Accompanying the move to flat income tax rates (see chapter 8), many policy makers in ECA countries have looked at the high payroll contribution rates and suggested that lower rates might result in higher revenue. Still others look at the enormous growth of informality in these countries and seek to lower contribution rates to stem the tide toward informality of labor markets. Many ECA countries have already lowered their pension contribution rates or are planning to do so soon in hopes of increasing coverage and compliance.

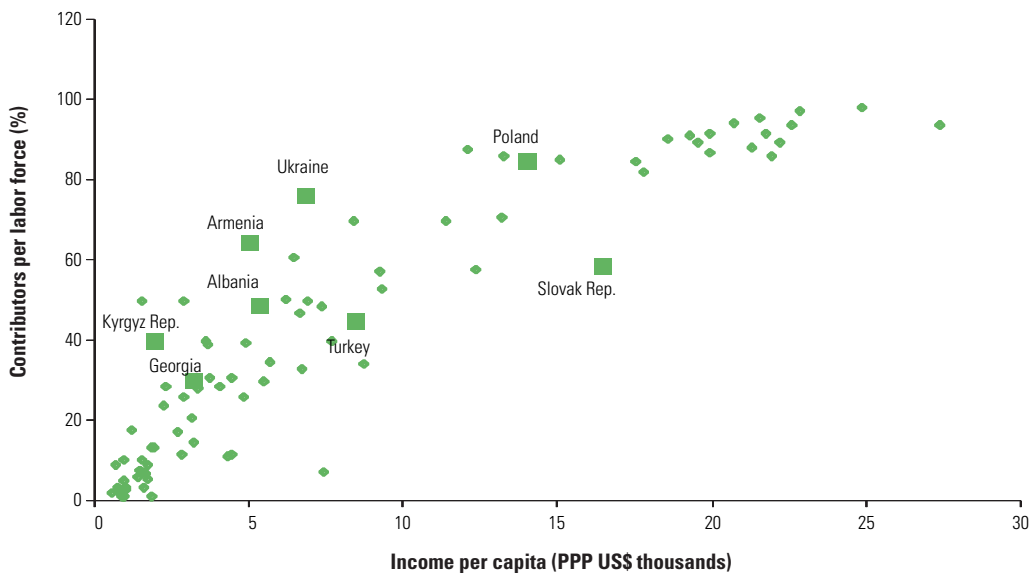
While formal sector employment may increase somewhat as a result of lower payroll taxes, international evidence suggests that the increase will be insufficient to counteract the reduced revenue from the lower tax rate, much less actually increase revenue, as discussed further in chapter 9. After reviewing a variety of international evidence, Hamermesh (1993) concludes that employment should be expected to increase about 0.3 percent for each percentage point of decrease in the payroll tax rate.⁶ Because this magnitude is insufficient to keep revenue neutral, most countries cutting payroll taxes will experience an immediate reduction in revenue, threatening the surpluses in Albania and Georgia and exacerbating deficits in the others. In addition, there is a fundamental difference between pension contributions and other types of tax revenue. Each contribution in a pension system comes with a liability for future benefits. Assuming that the pension systems were actuarially balanced before, cutting the contribution rates without changing benefits puts them actuarially in deficit. Increasing the number of contributors in a scheme that is actuarially unbalanced will raise long-run deficits, making such a strategy a loser both in the short and long runs. Because most of the

countries do not have actuarially balanced systems to begin with, raising the number of contributors only exacerbates the existing long-run deficit. While the increased formalization of workers may have other benefits, this potential negative fiscal consequence needs to be considered when enacting policies to increase formalization.

Internationally, contributor coverage seems to be related to income per capita, with higher income per capita leading to higher contributor coverage, as shown in figure 7.16. Some types of economic activity are more amenable to being included in the formal pensionable sector than others. The typical types of activities heavily engaged in by low-income countries, such as agriculture and very small scale business, are ones where compliance is difficult to enforce in every country. In addition, higher-income countries tend to have better institutional and administrative capacity to enforce compliance. But even in higher-income countries coverage rates are falling, not rising. As the economic structure changes in favor of smaller, more dynamic companies, and as job switching becomes more common in lieu of lifetime employment with a single large employer, workers and their

FIGURE 7.16

Pension Contributor Coverage in ECA Focus Countries Compared with International Averages



Source: Palacios and Pallarés-Miralles 2002.

Note: Data for ECA focus countries are from 2003 and 2004; for other countries, 1998.

employers are finding ways to avoid paying payroll taxes in even the richest countries. Thus, even the highest-income countries may have reached a plateau on coverage.

Figure 7.16 shows the results from a regression analysis of data from 87 countries (Palacios and Pallarés-Miralles 2002). What is clear from this analysis is that many of the ECA countries are still outliers even today. Albania, Armenia, Georgia, the Kyrgyz Republic, Poland, and Ukraine and all lie well above the internationally derived coverage graph, suggesting that these countries have higher coverage relative to other countries at their income levels. The likelihood of any of these countries increasing coverage further through either policy or administrative measures is low. Decreasing contribution rates would unambiguously reduce revenue. While this could potentially spur employment, it would put additional strain on pension financing. However, both the Slovak Republic and Turkey have greater potential to raise coverage. Croatia and Romania are not labeled on the figure because both countries lie essentially on the regression curve.

The move toward lower contribution rates without commensurate reductions in benefits is troubling on a number of other grounds. As the pension schemes earn less revenue, government resources earned from other sources are used to cover the resulting deficit as a supplemental source of finance. Because pensions are generally designed to be linked to contributions, which are themselves linked to wages, higher-income people generally receive higher pensions. As a result, tax revenue, which is often more broadly based than payroll taxes, is used to support pensions for a subset of the population that typically earns higher incomes than the overall population, and in such a way that the highest-income individuals get the highest benefit.

In the ECA context, the distinction between covered and uncovered segments among the retiree population is not yet that large, but it will grow in the next 25 years. However, in most countries greater benefits already go to higher-income individuals. Even in countries like Georgia, where benefits are almost equal, the categories receiving higher benefits and special privileges are all higher-income individuals. From an equity point of view, subsidizing pension systems from general revenues is an extremely regressive use of public finance. While this may be acceptable in the short run during a transition period in an ongoing reform, in many of the cases where contribution rates have been reduced, the imbalance is permanent and not likely to improve substantially over time.

The political economy of the social insurance system also becomes altered when the government starts making substantial contribu-

tions. When the system is just employer and employee financed, individuals who have not made contributions are not given pensions because they have not earned the right to a pension. However, when the system is half financed from government revenue it becomes difficult to deny pensions to those who contributed to general revenue but did not make explicit pension contributions. The government financing component makes pensions more a social policy than an acquired right that one has to pay contributions to earn, making it difficult for governments to deny similar benefits for the individuals who are among the poorest of the elderly.

In sum, governments need to consider a broad range of trade-offs in deciding whether to lower payroll taxes as a means of increasing employment and formalization. To the extent that formalization does increase, there may be significant fiscal costs, and to the extent that increasing pension deficits must be funded by general revenues, there may be serious equity and political economy issues. If pension benefits are linked to earnings, rather than being replaced, as in Georgia, by minimum social assistance payments across the board, it is critical that contribution rates be sufficient to keep them self-financing.

Two Strategies for Reform

Given the variance of income and institutional capacity within the ECA region, we would propose two separate reform strategies, one more appropriate for lower-income countries and the other for middle- and higher-income countries. In addition, it may be worth separating the design of the pension system for future retirees from the issue of how to finance the cost of today's large retiree population, although avoiding an abrupt change in policy suggests that there needs to be a transition between the two.

Lower-Income Settings

For the lower-income countries, the likelihood of raising coverage enough that most elderly of the future will receive pensions from a contributory pension system is small. Given that the bulk of the elderly will either receive no pensions or only small pensions because of incomplete contribution years, these countries need to consider other options for providing assistance to the elderly. The most likely options are a universal pension given to all individuals above a certain age, or a means-tested pension given to all individuals above a certain age

and below a certain income level. Either option would be financed from general revenue but would not cause the equity problems found with government financing of contributory pensions, because the pensions would be available to all and the benefit would either be the same for all or would fall as income goes up.

One advantage of delinking the pension from contributions is that governments are then free to set the level of the pension based on what is financially feasible rather than on the basis of what is owed to a pensioner. While a universal pension is more expensive and less targeted, it is easier to administer, resulting in lower administration costs. If the pension is low enough, the affluent often do not bother to register, improving the targeting somewhat. And it is possible to tax the pension when income passes a certain threshold, again improving the overall targeting of the pension. However, a means-tested pension may be a better choice in countries where means-testing mechanisms are already established. The means-testing can be as rudimentary as checking whether the individual qualifies for some other type of pension if one exists. However, when other systems exist, the means-tested pension may reduce the incentives to make contributions to the contributory systems. Keeping the level of the social pension low or raising the threshold age at which the means-tested pension becomes available may limit the disincentives arising from instituting such a pension.

Depending on existing arrangements, the universal or means-tested pension can be complemented by a self-financing pension for either a subset of the population on a mandatory basis, such as the public sector or formal sector workers, or for the whole population on a voluntary basis. Middle- and higher-income individuals will want some mechanism to smooth their lifetime consumption and provide a living standard closer to what they were accustomed to during their working lives. Because such mechanisms may not automatically exist in an economy, the government may need to nurture their development or even provide them. Ideally, the pension should be provided on a defined-contribution basis by private providers. Such a system delivers the best return for the contribution in the context of an aging population and limits government liabilities toward a subgroup of individuals who either self-select themselves or are chosen as the ones to be covered under the system by the government. In either case, the individuals tend to be higher income and should not produce liabilities for the government. However, for such a system to succeed, financial markets and institutions must exist and function well at a rudimentary level at least, and the government needs to provide responsible supervision

and regulation of the system. If the mechanism is provided on a voluntary basis, financial markets can be allowed to develop as the pension system itself grows. If the mechanism is provided on a mandatory basis, the financial market must already be at a certain level to make the mandatory pension contribution secure and worthwhile (Rocha and Rudolph 2007). However, aside from greater public responsibility when a system is mandatory, the distinction between mandatory and voluntary systems becomes blurred in an environment where enforcement and compliance are limited.

If the appropriate financial market conditions do not exist, the country could consider a small, self-financed, publicly managed pay-as-you-go system that is actuarially balanced in the long run for those who are able and willing to contribute. The important point is that this system must be self-financed and not rely on government subsidies, either in the short run or in the long run. Because it is not being provided to the entire population, it should not cause the government to incur net liabilities.

How does a country move from the current system of payroll-financed contributions to a universal pension financed out of general revenue? In Georgia, little transition is required. Georgia currently has a universal pension for all practical purposes. All elderly individuals with five years of work history receive a flat amount per month, with the exception of a few special categories. Almost all individuals can provide sufficient evidence of five years of work history because labor force participation was mandatory during socialism. Almost anything constitutes sufficient evidence because authorities do not have their own records with which to check work history. In Georgia, the authorities would merely have to declare the current pension to be universally available and would have to determine whether the current 20 percent social tax on wages is the least distortionary mechanism to finance this pension. Armenia is in a similar situation, as is Albania, to a lesser extent, as well as several other lower-income ECA countries. In Albania, well over half of current beneficiaries receive the minimum pension. For those who receive more already or expect to receive more based on past contributions, the government would incur transition costs in paying for the higher pensions these workers and pensioners have already accrued on the basis of contributions, while the contribution revenue disappears. However, there are ways of making these costs more manageable, such as by removing wage taxes only for those below a certain age or by raising both legal and effective retirement ages and making other adjustments to the benefits provided.

Middle-Income Settings

For middle-income countries, a contributory pension of some type would be beneficial. Pension systems serve two objectives: (a) to alleviate poverty among the elderly and (b) to allow pensioners to achieve similar levels of consumption during their retirement as they achieved during their working years. For the first objective, the social or universal pension is an appropriate tool, but because its focus is poverty alleviation it is unlikely to provide enough income to replace the previous income of middle- or high-income individuals. Because no society wants deprivation among the elderly, the primary focus has to be on the first objective in cases where resources and institutional capacity are limited. However, countries with more resources and more institutional capacity can also make some headway toward achieving the second objective.

Middle-income countries can look to the contributory pension system as the main foundation of their old-age support, expecting at least half or more of the labor force to actively contribute to the pension system. However, this contributory system would need to be complemented by some form of social assistance for those elderly who either do not contribute or for whatever reason cannot contribute. Because more than half of the elderly would have a contributory pension income during their old age, this social assistance should ideally be means-tested so that it focuses only on those who do not have contributory income. There are examples worldwide of higher-income countries that have chosen to provide all elderly with some basic pension, Canada being notable among these. This social pension can be provided to only those who have no contributory pensions or can include those who have contributory pensions, but at such low levels that they should receive some supplement from the state. In these cases, the social pension serves as an alternative to a minimum pension in the contributory system.

On the contributory side, the pension can take a number of forms. It can be a purely defined-contribution pension, where individuals and their employers put their contributions in individually owned retirement savings accounts that invest in a variety of financial market instruments that generate interest earnings for the workers. Upon retirement, these accounts are typically converted into annuities or other forms of periodic payment generating a stream of income for the elderly. The government in this case has the responsibility for supervising and regulating these retirement savings accounts, but does not face additional liabilities. There may be a small liability if the government provides a minimum pension guarantee to individuals,

the size of which depends on the amount of the minimum pension and the conditions under which it becomes available. Chile, for example, has moved its pension system to a defined-contribution system. The other extreme is Ireland, which has a public contributory system but only provides individuals with a flat payment depending on years of service but not related to previous income level or the amount of individual contributions. In between are countries like Spain, which provide a public pension related to both the level of contributions and the years of service.

In looking at future contributory systems, countries need to be careful to design a structure that is self-financing in both the short run and long run. There is obviously a relationship between the level of benefit to be financed and the payroll contribution rate that will finance this benefit in a sustainable way. Despite the historically high benefit rates in the ECA region, countries now have to consider more modest benefit rates for at least three distinct reasons. First, the high labor taxes required to finance a high level of benefits clearly distort the labor market, both discouraging business investment and reducing formal employment. Tying contributions to benefits, so that these labor taxes are regarded as deferred income rather than distortionary taxes, is an improvement but has not reduced distortions as much as had been hoped (see chapter 9).

Second, individuals have different preferred time paths for their consumption. Some prefer to save early in life and consume later in life. Others with higher discount rates prefer to consume when young and to live more sparsely in old age. Individuals will be happiest when they are allowed to live as they wish. Governments, however, are interested in preventing old-age poverty and are generally not willing to allow old-age deprivation even if that were the individual's choice. In addition, individuals can be myopic and not make the correct choices early in life. While these are arguments for government mandates for pension contributions, these are not arguments for a high level of mandatory benefits or for the high payroll taxes required to finance high benefits. Governments need to think of modest mandatory contributory systems, not the generous systems of the past.

Finally, pensioners typically need far less income than working-age people. The household size for a pensioner is typically smaller, reducing the number of people requiring support. Furthermore, nutrition requirements fall with age, the elderly rarely pay payroll taxes and often pay less in other taxes as well, and the elderly can engage in less costly activities than working-age individuals whose time is more constrained. The one expense category that increases markedly for the elderly is health care, including pharmaceuticals.

Each country needs to evaluate the appropriate requirements of a pensioner, taking into account its own health care system and what the pensioner needs to spend out of his or her pension to accommodate health needs. While historical pension systems in ECA provided 60–100 percent of gross wages earned while working, mandatory pension systems should typically provide only about 40 percent of the average wage at a cost of about 15–20 percent of the wage as contribution. Individuals can be encouraged to save beyond this level through other systems.

In what form should this pension be provided? In an ideal world, individuals should save money as mandated by government and then finance a pension from these resources when they cannot work. Such a system eliminates liabilities for governments, eliminates arbitrary intergenerational transfers, and results in the least distortionary incentives for individuals. However, when public pension systems were first being designed in Europe and elsewhere, sufficiently secure financial institutions did not exist to intermediate between generations. Thus, governments became the intermediary, taking contributions from one generation and using them to pay benefits to the older generation, with the promise that the next generation's contributions would be used to pay benefits to the current contributing generation. When these systems first began, there were few elderly and many workers, and it was possible to pay generous benefits for the few elderly with minimal contributions from each of many workers. The systems then became politicized, and additional and more generous benefits were added in response to political pressures. Demographic changes also began to equalize the sizes of the beneficiary populations with the contributing populations, forcing rises in contribution rates, while changes in benefits or benefit eligibility was strongly resisted, resulting in fiscal problems for most European and other OECD pension systems today.

ECA countries should not replicate the historical path of the more developed countries, but rather find an approach that suits where they are today and that is appropriate given their demographic and institutional situations. While the domestic financial markets of many ECA countries are not much different from what Western Europe faced when it made the choice of publicly provided pension systems, the demographics are much less favorable, with many ECA countries having rapidly aging societies. Given these demographic conditions, pay-as-you-go public pension systems, where contributing generations pay for the benefits of the elderly, will be quite expensive as the contributing populations shrink relative to the beneficiary populations. These systems are also difficult to dismantle,

suggesting that even younger countries want to be careful in instituting such systems. However, international financial institutions do exist that can handle savings from individuals, although exchange rate issues may limit the extent to which countries may wish to have their pension savings invested abroad. Furthermore, savings systems do impose financial market risk on individuals who may have limited capacity to absorb such risk. For these reasons, countries like Poland and the Slovak Republic have chosen to adopt a mixed design, where part of the pension continues to be provided through the public system (which might ultimately offer lower rates of return but may be less variable), and the remainder is invested by the individual in private pension funds (which are expected to offer higher rates of return). While the ideal weighting of the two parts of the pension system depends on many factors (including preferences for public versus private provision), and the design of the public part can take many forms (from Poland's notional accounts to the Slovak Republic's point system to Turkey's conventional defined-benefit system), most middle-income ECA countries would be best served if their modest contributory pension systems included elements of both a savings system and a pure publicly provided system. As noted above, these need to be complemented with mechanisms to provide for those who are unable to contribute for whatever reason. Given the modest scale of the benefits, they also need to be complemented with opportunities for individuals to save more and accumulate more generous pensions if desired.

The system just described would be an ideal system if the policy maker were starting from no pension system. But all ECA region countries already have pension systems, and these initial conditions will strongly determine how quickly or even if such a system can be adopted. Two primary obstacles arise in moving to a mixed contributory system. First, when individuals contribute to their own savings accounts, that portion of their contributions can no longer be used to finance benefits for the current elderly, requiring additional government financing to cover these benefits. Depending on the number of elderly, the level of their benefits, and the extent of contributions diverted to individual accounts, these costs can be formidable. Second, domestic financial markets may not provide sufficient and secure assets in which these savings can be invested. While countries such as Poland, the Slovak Republic, Croatia, and Romania—which are members of the European Union—face fewer problems with investing abroad, countries like Kazakhstan (which has also adopted the individual savings account approach) may face greater difficulties. Exchange rate risks and domestic opposition to foreign investment of

scarce domestic capital may limit foreign investment options while domestic options are scarce.

Regardless of whether a funded pillar is feasible, public pay-as-you-go systems can be reformed by raising retirement ages, reducing early retirement, only linking increases in pensions to inflation, adjusting benefits where needed, and improving administration and governance. At the same time, countries should try to deepen their domestic financial markets, which will improve economic performance and welfare regardless of the pension system. When transition costs to a funded pillar are not formidable and when domestic financial systems are deep enough, the country can consider adopting a funded system if it so desires.

Conclusions

This chapter has reviewed the fiscal implications of pension systems in ECA and suggested paths for reform to balance fiscal needs with social protection and poverty reduction among the elderly. ECA faces a unique combination not present in other high-growth comparators: (a) a historical legacy of high pension coverage and generous pension benefits; (b) a rapid decline in recent years in labor force participation and thus in the number of pension contributors; and (c) a rapidly aging population. This combination of factors creates strong fiscal pressures, and none of the systems surveyed will achieve fiscal balance in either the near term or the long term under current projections while providing reasonable benefits to contributors. It will be necessary to still further alter parameters—raising retirement ages, lowering benefit levels, and limiting indexation—if countries are to reduce fiscal pressures and free up public resources for growth-enhancing expenditure.

The chapter proposes separate strategies for low-income and middle-income countries. As a basic system, low-income countries should opt for a simple low-rate benefit available to all elderly people (or targeted to the poor) and financed out of general government revenues (as is being adopted, for example, in Georgia). This can be supplemented by contributory systems for subsets of workers, but the latter should be wholly self-financing to avoid regressive fiscal transfers. Middle-income countries have the administrative capacity and financial systems to support contributory systems for a broader set of workers and can draw from various models that have been successful elsewhere. Again, parameters should ideally be set to

ensure self-financing, which would require a reduction in benefits in most ECA countries.

Reforms will inevitably meet political resistance, and strong leadership over the long term will be required. However, the importance of these reforms must not be underestimated—they are essential for sustained economic growth.

Notes

1. For the ECA countries, in most cases age-specific data on pensioners and contributors was compared with age-specific population data. However, the data correspond to specific years for which data were available rather than the same year for all countries. For the international comparators, data on pensioners and contributors were not age-specific; all pensioners were attributed to an elderly population and all contributors were attributed to working-age population. Had the same methodology been applied to ECA countries, they would have appeared even farther to the right than shown in figure 7.4, given the prevalence of early retirement in ECA countries. While the data shown are not strictly comparable, it does serve to illustrate a fundamental difference between ECA and non-ECA countries.
2. The 2006 law included a further increase in the retirement age to 65 for men and women, phased in between 2036 and 2048, and also changed other pension parameters.
3. The package of Slovak reforms included a slightly higher contribution rate, rising from 28.00 percent to 28.75 percent; a lower accrual rate of 1.19 percent per year, down from 2.00 percent for the first 25 years and 1.00 percent subsequently for a maximum of 67 percent; inclusion of lifetime wages in computation of pensions rather than highest 5 of last 10 years' salary; lower indexation, 50 percent to inflation and 50 percent to nominal wage growth, compared to the previous 100 percent to nominal wage growth; higher retirement ages of 62 for both men and women phased in from the previous 60 for men and 53–57 for women depending on the number of children they had; and a tying of contributions to benefits with the point system, making the ceiling on contributions the same as the ceiling on pensionable wage.
4. Albania, Armenia, Croatia, Georgia, the Kyrgyz Republic, Poland, Turkey, and Ukraine.
5. While men's life expectancies in ECA countries tend to be significantly lower than those for men in Western Europe, the differential for women's life expectancies with Western European countries is much lower, resulting in an even larger difference between men's and women's life expectancies in ECA countries.
6. Hamermesh (1993) provides a comprehensive survey of empirical studies of labor demand over a variety of countries and calculates this consensus estimate.